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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,842	03/23/2004	Krishnakant P. Vora	59595US002	4248
32692	7590	11/02/2007		
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			EXAMINER SANDERS, KRIELLION ANTIONETTE	
			ART UNIT 1796	PAPER NUMBER
			NOTIFICATION DATE 11/02/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/806,842	<b>Applicant(s)</b> VORA, KRISHNAKANT P.	
	<b>Examiner</b> Kriellion A. Sanders	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-33 is/are pending in the application.
- 4a) Of the above claim(s) 22-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-21 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/04, 7/05, 1/06, 6/06, 1/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I, claims 1-4 and 6-21, in the reply filed on 3/20/07, is acknowledged. Claims 22-33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3/20/07.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 5-7 and 6-16 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beall et al, US Patent No. 5,830,528.

Beall et al discloses compositions, in particular, intercalates and exfoliates thereof formed by contacting a layered phyllosilicate with a functional organic monomer (intercalant monomer), having at least one hydroxyl functionality and/or an aromatic ring, to sorb or intercalate the intercalant monomer or mixtures of intercalant monomers between adjacent phyllosilicate platelets. Patentee indicates that any swellable layered material that sufficiently sorbs the intercalant monomer to increase the interlayer spacing between adjacent phyllosilicate platelets to at least about 5 .ANG., preferably to at least about 10 .ANG may be used in the practice of the

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invention. Useful swellable, layered materials include phyllosilicates, such as smectite clay minerals.

In accordance with another embodiment of the invention, the intercalates can be exfoliated and dispersed into one or more melt-processible thermoplastic and/or thermosetting matrix oligomers or polymers, or mixtures thereof.

Bealle et al indicates that the pentaerythritol which is used in the patented invention is commonly used in self-extinguishing, nondripping, flame-retardant compositions with a variety of polymers, including olefins, vinyl acetate, alcohols, methyl methacrylate, and urethanes. The pentaerythritol is used in conjunction with trimethylolpropane acrylic esters for solventless lacquer formulations Patentee indicates that products of the patented invention containing phyllosilicate platelets, based on polyglycerol matrix monomers, are useful in surface-active agents, plasticizers, adhesives, lubricants, antimicrobial agents, medical specialties and dietetic foods. Patentee therefor suggests the use of the intercalates, which comprise pentaerythritol and acrylic esters, in both flame retardant and/or antimicrobial compositions.

Vulcanizable and thermoplastic rubbers useful as matrix polymers in the practice of the invention include ethylene-propylene-diene terpolymers, and ethylene-acrylic acid copolymers.

Other topically-active compounds can be included in the compositions of the invention in an amount sufficient to perform their intended function. These include, for example, zinc oxide.

Beall suggests the components of applicant's claims. The selection of each of these components from the patented disclosure would have been obvious to the ordinary practitioner of this art at the time of applicant's invention.

See the abstract and claims and col. 8, line 50 through col. 14, line 34.

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4. Claims 1-2, 5-7 and 6-16 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over.

Patel et al, US Patent No. 6,638,993

Patel et al discloses non-silicone vulcanized rubber articles made from at least a majority by weight of ethylene-propylene-diene modified (terpolymer) rubber (such as, without limitation, EPDM and/or NBR) that further include silver-based compounds to provide highly desirable long-term antimicrobial characteristics within the cured rubber articles. An object of the invention is to provide a vulcanized EPDM and/or NBR rubber-containing article, comprising filler components and plasticizers (such as silica, metal salts, organic salts, calcium carbonate, metal oxides, clays, and oils). The colored vulcanized rubber-containing article of the invention comprise at least one non-discoloring silver ion control release additive, such as those selected from the group consisting of fillers (such as calcium carbonate, china or calcined clay, silane-coated or mixed silica, bivalent metal silicates, aluminum trihydrate, and any mixtures thereof), at least one coloring agent to provide a color to the article other than black, and, optionally and at least one plasticizer (e.g., oils such as phthalate oils and paraffinic oils). Additionally, this invention encompasses a method of producing such a colored vulcanized. Additionally, generally and preferably, certain fillers and, supplementally, oils, (such as bivalent silicates, silane-coated or mixed silica, zinc oxide, clays, aluminum trihydrate salts, calcium carbonate, and other types that do not discolor silver antimicrobial-containing EPDM and/or NBR, as merely preferred examples, rubber formulations) are incorporated into the compositions to provide both flexural modulus and structural integrity to vulcanized rubber articles. The preferred silver-based ion exchange material is an antimicrobial silver zirconium phosphate

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available from Milliken & Company, under the trade name ALPHASAN.RTM. Such compounds are available in different silver ion concentrations as well as mixtures with zinc oxide. Other additives present within the inventive vulcanized rubber article include any of the aforementioned silver ion release control additives, accelerators, accelerator activators, antidegradants, softeners, abrasives, colorants, flame retardants, homogenizing agents, internal lubricants, and deodorants. Such components should be present, if at all, in rather low amounts, of from about 0.1 to about 10 pphr.

See the abstract and claims and co. 3, line 4 through col. 4, line 64 and col. 5, line 59 through col. 6, line 35.

Patentee suggests the components of applicant's claims. The selection of each of these components from the patented disclosure would have been obvious to the ordinary practitioner of this art at the time of applicant's invention.

Claims 3, 4, 8 and 17 are objected to as depending upon a rejected base claim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kriellion A. Sanders  
Primary Examiner  
Art Unit 1796

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